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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,091	12/21/2000	Jeffrey L. Kodosky	5150-45900	1583

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EXAMINER

KANG, INSUN

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/747,091

Applicant(s)

KODOSKY ET AL.

Examiner

Insun Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6/6/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This action is responding to application papers dated 4/2/01, 6/6/02, and 12/21/00.
2. Claims 1-31 are pending.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because the first sentence of the abstract is not in narrative form. The use of the verb "may" is not specific enough concerning the invention's function. It should be stated in a more definitive manner. Correction is required. See MPEP § 608.01(b).
5. The use of the trademark JAVA and PASCAL (pg 1, ln 15) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

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Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression "providing information specifying a state diagram" is unclear whether the information is generated by a program or received from user. It is interpreted as " providing state diagram information received."

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-10, 12-17, and 19-31 are rejected under 35 U.S.C. 102 (e) as being anticipated by Uczekaj et al. (US 5,920,718).

Per claim 1, Uczekaj et al. disclose:

A computer-implemented method for programmatically generating graphical program based on a state diagram comprising: receiving state diagram information ("graphical control system for automatically generating application program shell code (col 3, lines 33-49)"; "user to enter objects with state information...based on the entered information, generates application shell code (col 4, lines 28-39) wherein the state diagram information specifies one or more states ("a minimum of one data state is required for describing control information (col 1, lines 39-41)" programmatically generating the graphical program in response to the state diagram information(col 4, lines 28-39) wherein said programmatically generating comprises programmatically generating graphical source code corresponding to the specified one or more states (col 1, lines 39-41; col 3, lines 33-49; col 4, lines 28-39; col 6, lines 1-23; col 10, lines 7-40; col 16, lines 17-23).

Per claim 2, Uczekaj et al. disclose:

The method of claim 1, wherein the state diagram information represents a state diagram (col 10, lines 7-22).

Per claim 7, Uczekaj et al. disclose:

The method of claim 1, wherein said programmatically generating the new graphical program creates the new graphical program without any user input specifying the new graphical program during said creating (col 3, lines 34-46, "...eliminates the need to program in or edit control application code by hand...").

Per claim 8, Uczekaj et al. disclose:

The method of claim 1, wherein said programmatically generating the graphical program comprises programmatically generating a block diagram including the graphical source code corresponding to the specified one or more states.

In col 10, lines 7-22, Uczekaj et al show that "after the user has completed entry of the information ... displaying the state diagram ... in a predefined location on the display for presenting a state diagram... state names are displayed in ovals representing object states." In col 15, lines 7-14, Uczekaj et al specifically show the block diagram "displayed as oval... the lines with arrows that interconnect the oval states indicate transitions from one state to the other in the direction of the arrows...."

Per claim 9, Uczekaj et al. disclose:

The method of claim 1, wherein the programmatically generated graphical source code includes placeholder graphical source code for each state. The placeholder (e.g. dummy, container) is for the user to fill in the program with specific instruction code. Uczekaj et al. show that "the generated code is called

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application shell code because all code is generated except the specific code for any user method names entered in define user method ... (col 10, lines 27-40)". See also col 6, lines 30-33.

Per claim 10, Uczekaj et al. disclose:

The method of claim 9, further comprising: for each state, a user manually entering graphical source code specifying execution instructions to be performed when the state is active during execution of the graphical program (col 6, lines 30-33; col 10, lines 27-40; col 9, lines 56-64).

Per claim 12, Uczekaj et al. disclose:

The method of claim 1, wherein, for at least one state, the state diagram information specifies program code associated with the state (col 3, lines 4-8; col 9, lines 55-65); wherein the programmatically generated graphical source code includes the specified program code (col 4, lines 28-39; col 6, lines 30-33, col 5, lines 26-40).

Per claim 13, see the rejection of the claim 12 above.

Per claim 14, Uczekaj et al. disclose:

The method of claim 1, wherein the state diagram information further specifies one or more state transitions (col 1, lines 40-48), wherein each state transition specifies a transition from a first state to a second state (col 9, lines 45-64; col 15, lines 7-14); wherein said programmatically generating further comprises programmatically

generating graphical source code corresponding to the specified state transitions (col 10, lines 23-40).

Per claim 15, see the rejection of claim 9 above.

Per claim 16, Uczekaj et al. disclose:

The method of claim 15, further comprising: for one or more state transitions, a user manually entering graphical source code specifying a Boolean condition associated with the state transition (col 1, lines 39-48; col 9, lines 46-67; col 10, lines 1-6).

Per claim 17, Uczekaj et al. disclose:

The method of claim 14, wherein the state diagram information specifies at least two state transitions from a particular state (col 15, lines 7-14); wherein the state diagram information also specifies a priority ordering for the at least two state transitions (col 15, lines 30-33); wherein said programmatically generating comprises programmatically generating graphical source code such that, during execution of the graphical program, Boolean conditions associated with the at least two state transitions are evaluated in the specified priority ordering (col 15, lines 20-30).

Per claim 19, Uczekaj et al. disclose:

The method of claim 1, wherein the state diagram information further specifies one or more stop states; wherein said programmatically generating comprises programmatically generating graphical source code such that if during execution of the graphical program one of the stop states becomes active, then the graphical program is caused to stop execution (col 14, lines 40-43; col 14, lines 47-55).

Per claim 20, Uczekaj et al. disclose:

The method of claim 1, further comprising: receiving information specifying a change to the state diagram information; programmatically updating the graphical program to reflect the specified change (col 6, lines 48-67; col 7, lines 1-6; col 10, lines 33-40).

Per claim 21, Uczekaj et al. disclose:

The method of claim 1, wherein said programmatically generating the graphical program comprises calling an application programming interface (API) enabling the programmatic generation of a graphical program (col 16, lines 39-60).

Per claim 22, Uczekaj et al. disclose:

The method of claim 1, wherein said programmatically generating the graphical program comprises programmatically requesting a server program to generate the graphical program (col 3, lines 25-33; col 8, lines 9-23).

Per claims 23, 26, and 29, see the rejection of claim 1 above.

Per claims 24, 27, and 30, see the rejection of claim 7 above.

Per claim 25, Uczekaj et al. disclose:

A computer-implemented method for programmatically generating a graphical program based on a state diagram, comprising: displaying an initial state diagram (col 10, lines 7-22); programmatically generating a graphical program corresponding to the initial state diagram (col 10, lines 23-40); receiving user input specifying a change to the initial

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state diagram (col 9, lines 46-61; col 7, lines 7-11, "the user has completed entry of the information into object interface section"); programmatically updating the graphical program to correspond to the specified change, in response to the user input specifying the change (col 6, lines 48-67; col 7, lines 1-6; col 10, lines 33-40).

Per claim 28 and 31, see the rejection of claim 8 above.

Per claim 3, Uczekaj et al. disclose the state diagram representing desired operation of a software program ("...creating objects and object control fora drill system ...the invention can be used to describe objects in various other environments", col 4, lines 23-39; col 5, lines 34 -41; col 10, lines 7-22).

Per claim 5, Uczekaj et al. disclose the state diagram for a drill system and that the state diagram can be used to describe objects in various other environments (col 4, lines 23-39; col 5, lines 34 -41; col 10, lines 7-22). An A state diagram is used to describe the behavior of a system and each diagram usually represents objects of an individual class and identifies the different states of its objects through the system. As an algorithm is any sequence of operations for performing a specific task, the state diagram can represent the desired algorithm for software, any other non-software system so that each state of operation can be specified, conceptualized, visualized, and constructed in the diagram. Thus, validating and testing

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the architectural design of the system can be accomplished in a straightforward manner. Therefore, accordingly, Uczekaj et al anticipate this claim.

Per claims 4 and 6, as an algorithm can be designed for anything, see the rejection of claim 5 above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uczekaj et al. (US 5,920,718), further in view of Kodosky et al. (US 5,732,277).

In regards to claim 11, Uczekaj et al. do not specifically mention that the placeholder graphical source code for each state comprises a case in a graphical case structure. However, Kodosky et al. disclose that the placeholder graphical source code for each state comprises a case in a graphical case structure (col 20, lines 30-49; col 11, lines 43-60, col 11, lines 44-60) so that it is easy for a user to cycle through the alternatives of each case.

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Therefore, It would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate the teaching of Kodosky et al. to the method of Uczekaj et al. The modification would have been obvious because one of ordinary skill in the art would have been motivated to include a case structure so that a menu list of alternatives on the screen for a user to choose from is available.

In regards to claim 18, Uczekaj et al. do not specifically mention that the state diagram information specifies an initially active state; wherein said programmatically generating comprises programmatically generating graphical source code such that the graphical program begins execution in the initially active state. However, Kodosky et al. disclose the state diagram information specifying an initial active state and the graphical program beginning execution in the initial active state (col 35, lines 13-18; col 35, lines 31-64) so that the initial graphical program launches displaying the corresponding initial state diagram and the user can simply start to change the state diagram accordingly.

Therefore, It would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate the teaching of Kodosky et al. to the method of Uczekaj et al. The modification would have been obvious because one of ordinary skill in the art would have been motivated to set the state initially active so that the initial graphical program corresponding to the initial state diagram is automatically created and the user could simply change the state diagram as desired by adding state or transition, etc.

Double Patenting

12. Claims 1-10, 12-15, and 20-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of application No. 09/745023. Although the conflicting claims are not identical, they are not patentably distinct from each other because: application 09/745023 (US 20010020291) claims 1-10, 12-15, 20-31 – generating a graphical program, state diagram information, placeholder, manual user input, block diagram, updating the program, API, requesting a server program, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. The claims of the two patent applications correspond as follows:

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 703-305-6465. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 703-305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-308-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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11/14/03

A handwritten signature in cursive script, appearing to read "John Chavis".

JOHN CHAVIS
PATENT EXAMINER
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